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Gas Water Heating

The gas man must wake up

H. J. Long

OUTSIDE of radio and the crossword puzzle, there was probably no single development during 1924 which made such enormous progress as the installation of oil-burning apparatus for house heating. In spite of a very high installation cost, and in many cases unsatisfactory and expensive operating cost, thousands of installations have been and are still being made, and as the efficiency and reliability of the apparatus is improved, oil heating will become a large and well established industry.

This tendency shows clearly the demand of the American public for automatic service. Almost regardless of cost, anything can be sold which will render relief from household drudgery and inconvenience.

Although this house heating has not directly competed with gas, it has pointed the way to the gas man, and most of them are alive to the possibilities of gas house heating in competition with both coal and oil heating, so that great progress can be expected in the immediate future. The house heating load is one, however, which is not attractive to many gas companies, under present conditions, while domestic water heating is, without doubt, one of the most attractive outlets for gas sales that can possibly be secured.

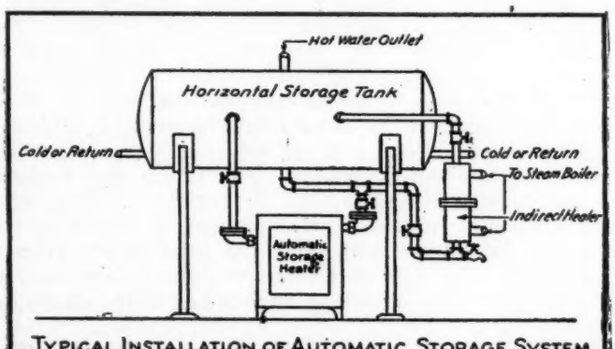
The Challenge of Oil

It is in the domestic water heating field that the gas company must be wide awake, not only to secure the very large volume of new business which can be developed, but to return that which they have. Like the small cloud gathering on the horizon, which so frequently presages the coming storm, a recent advertisement in the Saturday Evening Post by a manufacturer of an oil burner shows what the future has in store. "Heat water with oil, at a cost 40 per cent less than automatic Hot Water Service with Gas" is certainly a challenge which must put the gas man on his mettle, and demand of him the very highest type of sales concentration.

It is probably true that at present prices and more or less unreliable operation, the oil burner will not be a serious factor in water heating in the moderate sized home, but for larger installations in homes, apartments, factories and various industries, the oil burner can and will make great progress unless immediate steps are taken by the gas companies to secure this very valuable addition to their load.

Water Heating a Wonderful Opportunity

There is a wonderful opportunity for gas water heating, sitting on the doorstep of every gas company in the country, an opportunity which only requires the scientific use of auxiliary means to make the use of gas economical. The apartment house, the factory, the office building, where coal has heretofore ruled supreme, can be turned into a large profitable gas consumer. Hundreds of miles of idle



TYPICAL INSTALLATION OF AUTOMATIC STORAGE SYSTEM — WITH INDIRECT HEATER ON STEAM BOILER

mains in down-town streets, which formerly were the bulwark of the lighting industry, are today not paying the interest on their investment. Large buildings use practically no gas, but they do have hot water. This can be heated by gas if you go after the summer load. Sell the apartment house, the office building, gas water heating for the summer. Gas will give automatic service. By adding the cost of help, and removal of ashes, to the cost of coal, gas can be made economical and attractive. By placing an indirect heater on the house heating steam boiler, the water can be heated cheaper and better in the winter from the steam boiler than could be done with a separate heater, with the result that the owner receives twelve months of perfect hot water service at a reasonable cost, and the gas company adds several hundred dollars to their yearly income.

It is a special field. It must be developed by special men! You can get it now. Delay—let the oil man in, and your work will be doubled!

Heating Vertical Retorts with Coal Gas*

Canadian experiments prove practicality of undertaking

Frank Elcock

Superintendent Gas Works, Ottawa Gas Company, Ottawa, Ont.

WHEN the Ottawa Gas Company abandoned their old plant on completion of the new one in 1915, it was found necessary to find a market for the large increase in superfluous coke, as all gas made was from coal in continuous vertical retorts.

Large sums of money were spent in advertising, etc., delivery equipment, storage and coke-handling equipment, demonstrating and service, publicity has been maintained since then and a good market has been maintained for this fuel, the fuel board appointed by the Dominion Government have recommended coke as the most practical fuel to substitute for the rapidly diminishing supply of anthracite coal, the publicity given the recommendations of this board have also stimulated the demand for coke, with the result that we realized early last winter that the stock of coke built up during the summer months would be insufficient to cover the demand, we were then compelled to consider the purchase of coke or methods to increase production in order to satisfy our customers' requirements.

Experience With Coke

Our previous experience in importing coke was not very satisfactory, car shipments were often delayed, sales fluctuated with weather conditions, coke at times contained a high percentage of breeze, as sometimes of low fusibility, the density of coke varied, and costs of unloading, rescreening, stocking usually left little or no profit. Upon investigating the methods of increasing production, we realized that it might be profitable, if practical, to burn coal gas in our vertical retorts instead of producer gas made from coke, any coal gas used would release coke fuel for sale and increase coke production, as additional coal would be carbonized to produce gas for fuel purposes, the necessary estimates were made and placed before our management and it was decided to make the experiment.

Early in January a three-inch gas line was run from the outlet of the ammonia scrubber to the retort house, then was then connected into a main three-inch supply header in front of the settings, one and one-half inch and two-inch branches with regulating cocks were taken off this header and connected into each main producer gas flue to the settings, the gas supply was taken from the inlet of oxide purifiers as the residuals tar and ammonia were reclaimed from gas to offset costs of coal carbonized, the load and costs of purification were not increased and a good pressure for gas supply was available without having to use a compressor.

Using Gas as a Fuel

Gas was first admitted to one setting for experimental purposes, the main producer gas dampers were closed and primary air to producers closed, waste heat chimney dampers were also reduced, the individual dampers controlling each combustion chamber (both gas and secondary air) were not moved unless regulation was found to give very poor combustion, the regulation of these dampers was avoided as far as possible as we realized that gas was only to be used for a short time, and if altered they would probably have to be again reset when we resumed normal coke or producer gas firing.

Results

The combustion was found to be fairly even, but with a tendency for the upper chambers to have an excess and lower chambers insufficient gas, this was to be expected since the volume of coal gas required was less than one-sixth the volume of producer gas and the nostrils admitting gas had not been reduced to offset this reduced volume. After a few minor ad-

*Presented at the 1925 Convention of the Canadian Gas Association.

justments were made and figures obtained as to gas consumption, we soon realized that it would be to our benefit to extend the experiment to other settings with the hope of increasing coke production sufficiently to cover our requirements.

Gas was then extended and used on other settings as soon as possible and depending on the probable coke requirements until four of the five settings working were on gas and the capacity of the supply pipe was taxed.

Addition of Producer Gas

It was found later that by admitting a little producer gas with coal gas combustion in individual chambers was more even, and that the normal producer gas adjustment was more satisfactory for combustion, this accounts for coke consumption being given in comparing fuel or heat consumptions. It must be remembered that this work was not done to determine the possibilities of gas-fired vertical retorts or the probable operating costs of same; however, given the necessary favorable market for coke, there is no doubt in the writer's mind that it could easily be done and the operating costs considerably reduced, due to less labor, better temperature control and reduced capital cost.

The results given were taken from our quarter monthly reports, the gas consumed for firing purposes was determined daily, and fuel used weighed over an automatic scale.

Thermal Data

Comparisons of heat required per ton of coal carbonized are given below, the coke consumption being taken as 13 per cent of coal carbonized under normal operation. This figure was the average for the year 1924. It will be noticed that the heat consumption is considerably lower, especially when comparing the period when most gas was being used for firing purposes, more constant and accurate combustion can undoubtedly be obtained by gas firing, the loss of unconsumed coke in ashes and radiation losses from producers are eliminated.

The carbonizing temperatures obtained were not quite as good as would be desired during the period of using gas, but the results clearly show that there is a big reduction in necessary heat input as compared with coke fuel, comparing the fuel consumption on vertical retorts with coke oven operation we find it more favorable. This I attribute to the vertical retorts being a continuous process, and sensible heat of coke recuperated. We were well satisfied with the operating cost and practical application of gas as fuel and are prepared to repeat it again should the occasion arise.

Fuel Consumption per Ton of Coal Carbonized

	M. B.T.U.'s.)
Average coke fuel only under normal operation—	
Coke 13%or 260 lbs. at 12,000 B.T.U...	3,120.
For period 3 months partial gas firing—	
Coke 9.03% or 180.71 lbs. at 12,000 B. T.U.	2,168.52
Gas 1,361 cu. ft. at 475 B.T.U.....	646.48
Total	2,815.00
Reduced heat consumption 305,000 B.T. U. or 9.77% below normal.	
For period 1 month partial gas firing—	
Coke 6.62% or 132.45 lbs. at 12,000 B. T.U.	1,589.00
Gas, 1,967 cu. ft. at 472 B.T.U.....	928.40
Total	2,517.40
Reduced heat consumption 602,600 B.T. U. or 19.31% below normal.	
For period 9 days maximum partial gas firing—	
Coke 4.96% or 99.2 lbs. at 12,000 B.T.U.	1,190.40
Gas 2,215 cu. ft. at 478 B.T.U.....	1,058.70
Total	2,249.10
Reduced heat consumption 870,900 B.T. U. or 27.91% below normal.	
By deducting the average coal carbonized and fuel consumed in the only one of five settings working on coke fuel.	
Coke 3.22% or 64.42 lbs.....	773.
Gas 2.768 cu. ft. at 478 B.T.U.....	1,323.
Total	2,096.
Reduced heat consumption 1,024,000 B. T.U. or 32.82% below normal.	
Converting the coke fuel to gas in above	
773,000 ÷ 478 =.....	1,617 cu. ft.
Plus gas fuel =.....	2,768 cu. ft.
Estimated gas consumption of 478 B.T.U.	4,386 cu. ft.

BETTER HOME MOVEMENT TO REDUCE HOUSEHOLD OVERHEAD

Home economics experts and commercial managers of the American Gas Association have joined forces in a program to focus the attention of women on the advancements that have been made in gas appliances and to offer helpful instruction in their most efficient use.

"The better home movement must begin in the kitchen" is the opinion of those undertaking the work. In this connection it is pointed out that 50 per cent of the income of the average wage-earner goes through his kitchen. It is believed that the overhead in household management can be reduced in this department with better results than anywhere else.

"Overhead can be reduced," says a report, "in cost of materials, cost of fuel, cost of labor and depreciation, but the most staggering factor, and one which cannot even be estimated, is the time and labor necessitated by antiquated kitchen equipment.

"The modern gas range is the key to kitchen economy. It now is possible for a woman to place an entire dinner in the oven of her gas range, turn the oven heat regulator to the proper degree of heat, close the door and forget the dinner until such time as she is ready to serve."

Industrial Gas Business Has Lighter Side

Amusing though serious mistakes due to ignorance of thermal principles

A. J. Smith

THE thorough cultivation of the gas man's most powerful market, the industrial consumer, will materially increase the sendout of his plant, and conjointly careful observation of some of the past and present phases should help to develop his sense of humor. The ability to see the humorous side of things is particularly an asset when the gas man surveys the efforts of some of the more inexperienced inventors who are on their own initiative and with little knowledge of the subject start to develop a new and promising field for gas when it should only have been tackled in the closest co-operation with the gas company. There is in this industrial field data for many a good and enlivening paper for Gas Sales Association meetings dealing with some of the most daring efforts of zealous but misguided inventors and newcomers to the industry, and how these efforts have had to be counteracted!

Sales Efforts

Without venturing to doubt the scientific attainments of some of the newcomers in the design and the manufacture of gas apparatus, it is questionable whether they make sufficient allowance for the possession of a fair amount of scientific curiousity on the part of their prospects. Like many another recipient, I am of course interested to learn from an unexpected letter from one small maker that a rival make of furnace has been knocked out of the principal printing establishments in New York by his new design of apparatus, melting some 10,000 pounds of metal a day, but many a gas man on hearing the glad news must have been considerably perplexed to understand why this should have been such a knock-out blow, especially when no information is vouchsafed whether the feat was performed with a 28-pound or 20-ton melting pot, or what was the size of the rival furnace, or at what fuel consumptions the work was done. A gas man may well feel that if the new apparatus is really having the success claimed, there must have been somehow and somewhere behind it a selling campaign of a little more informative character than the communication in question.

Reducing Atmosphere

The type of small grey iron foundryman who embarks for the first time upon the construction of furnaces, aided and abetted by a jobbing bricklayer, is responsible for many a good story. Asked whether a furnace for which he had quoted would maintain a reducing atmosphere, a maker of this type wrote gravely that with a furnace of his design there was no possibility of this, as once the desired temperature was obtained the apparatus would maintain it exactly, without either reduction or increase! As the customer's chief trouble was oxidation, it is perhaps hardly necessary to say that this particular business was placed in a quarter where the requirements were a little better understood.

Dross

This question of oxidation is an important one in most trades, from some of the largest metallurgical undertakings down to a small printing establishment. It is a point, moreover, where a well-designed gas appliance can always be relied upon to show a substantial advantage and the gas company's staff, with their local knowledge and closer personal contact with the prospect, are usually able to deal with a problem of this kind in a slightly different manner from that adopted by the too-enthusiastic furnace maker, whatever the method of heating he may favor.

Some years ago a large firm of metal merchants, attracted by the claims put forward for a type of melting furnace which had some small success, not only in the States, but also in one or two countries in Europe, had a test carried out for them by the makers to show whether or not the system was suitable for the recovery of metal from the dross (or "ashes") taken from their existing melting pots. The results obtained on the tests were stated by the makers to be so excellent that the metal merchants were strongly counselled to install the new system immediately, in order that the economics of the method could start without loss of time. Exact details of the performance were curiously wanting, but in the end the information was elicited that from 112 pounds of "ashes," the market price for which in the locality was $3, an amount of metal had been extracted which was worth exactly $2.60, so that the adoption of the system would entail a loss of 40 cents for every 112 pounds of metal treated, in addition to the cost of the plant, depreciation, fuel, man's time, etc.

Correspondence

The mail bag of any gas man who cultivates the industrial field will furnish specimens of every kind of salesmanship, from the curtness of a large maker to the loquacity of the latest small arrival. Usually the larger the establishment the briefer the reply; but letters from some of the smaller members of the industry are more communicative—even chatty—and they frequently furnish such information upon metallurgy as is calculated to make the prospect rub his eyes to make sure he has read aright, and to wonder whether standard works will be revised in the

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GAS MERCHANDISING

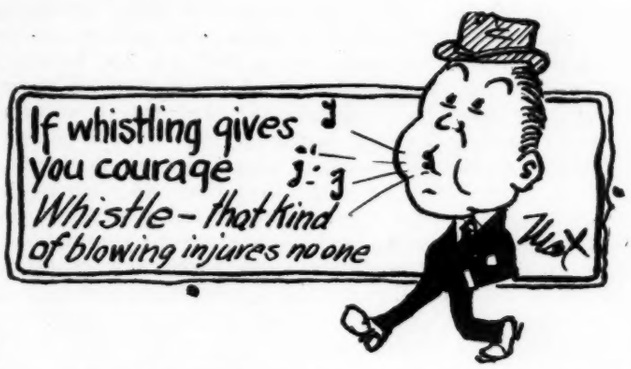
Domestic – Industrial

Ideas for the Man Who Sells

William H. Matlack

IMPORTANCE OF WOMEN AS CUSTOMERS

SOME time ago we had something to say in this department regarding the amount of selling effort that should be directed to the woman in the home, the home-manager. From various sources you have heard it said that woman is the largest purchasing agent in the world. Manufacturers, newspapers and research bureaus have told you that the women in America purchase 85 per cent of the merchandise purchased for the home, that in many lines of men's apparel the percentage runs somewhat higher, that, aside from automobiles, the woman is the one to appeal to in selling. It is obvious, therefore, that the gas appliance dealer should study the woman in order that he may arrange window displays that will appeal to her. He should study her that he may write direct advertising and newspaper advertising that will interest her.



ATTRACT THE FUTURE HOME MANAGERS

ATTRACT the home managers of tomorrow and **you will increase sales today.** Plan window displays that will attract children and they will advertise for you in a manner that will be highly profitable, and as they grow and have need for gas

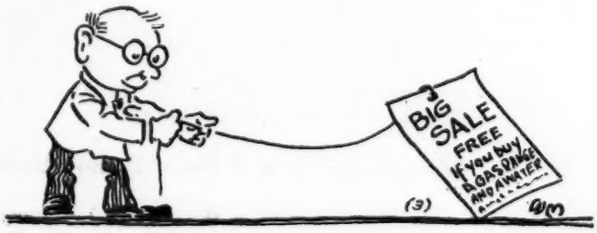
service and gas merchandise, they will have been educated to buy from your store. Don't forget that when children are attracted to your store and your windows, grown-ups get your story and they have to listen.

WELL, WE SHOULD GET IN

WE see by the building reports from several sections of the country that the percentage of single dwellings is again higher than that of any other class of buildings. That is cheerful news to the sales manager, for he undoubtedly can sell more and better gas equipment to the home owner than he has been able to sell to the house builder who buys by the gross. Of course, it may take more leg work, or gasoline, as the case may be, to sell to the individual home owner. On the other hand, there will be the added satisfaction of not having to shave prices to the bone. The man who is to pay for home equipment for his home and the woman who is to select home equipment for her home always buys better appliances than the man who buys for the simple reason that the houses have to be provided with a gas range and a water heater.

CUT THE STRING TO THE SALE

BIG sales with a string tied to them seldom run up to volume. To illustrate, a "combination sale" that calls for the purchase of a range and water heater to secure a discount of $5 will not



produce nearly the number of sales as a sale of ranges and water heaters with a sale discount of one dollar on water heaters (circulating type) and three dollars on ranges.

A Campaign for Gas Ranges*

The essential of successful campaign selling of appliances

A. F. Timberlake

NOT so long ago I was talking to the president of one of the larger holding companies, and the manager of one of his properties about putting on a gas range campaign.

After we had gone over the plan thoroughly the president turned to the manager and said—"go ahead, put it on, but—it must carry through, is all I have to say about it." It struck me that this man had sruck the weak place in all campaigns that are not successful. They simply do not carry through.

Time after time range campaigns have been started with the entire sales force, and, for that matter, the whole organization, full of "pep" and on their toes to "put over" a good one. The sale is to run thirty days and every one is saying "it will be the biggest ever." Then along about the second week, after it is started, you go into the gas company's office and the only way you could tell a sale was in progress, you would perhaps see a sign somewhere about it. But the entire sales force has dropped back into a rut following the line of least resistance, selling those who come into the show room and take a range away from them.

Results Not Always Obtained

Then when the sale is over you ask about it—they will tell you it was not so good; that times are hard and no one has any money; that the president is talking economy and no one is buying anything new—when the fact is there are hundreds of people right in their town who never knew the gas company was having a range sale. This is the reason so many managers are loath to let the commercial department campaign and why so many sales fall short of expectations.

A successful range campaign is just as carefully planned as ever a general planned an offensive. Planned and laid out down to the last detail, there is no reason why every sale should not be all you expect of it.

The most successful campaign I have ever seen was planned and gotten up in typewritten form, with a quota for each week, and what was to be done each week to keep up the interest, not alone of the buying public, but of the gas company personnel as well. It was planned to run one full-page ad at the beginning of the sale and smaller ads during its duration. These ads were gotten up and dated before the sale commenced—then, if any change was necessary, it was made at the time of issue.

Starting Campaign with a 3 Days' Demonstration

The sale commenced with a three-day demonstration, which was announced in the full-page ad. This ad also carried a premium offer. On the first night of the demonstration a supper was served to the entire organization, at which the manager announced that to every employee who turned in a prospect that was afterwards closed by the sales department, a bonus of $1 for each one would be given. This served to keep the whole force talking sales and talking stoves. The shop foreman alone turned 36 prospects that were closed.

Four days before the demonstration the company mailed out 2,000 neatly printed invitations, enclosing a folder of the range they were featuring. Then on the morning the demonstration began the salesman called up all their prospects on the telephone and gave them a personal invitation to attend. They had an attendance of over 150 every day and quite a number of sales were closed during this first three days. With every range that was sold the company gave the customer her choice of a 42-piece set of china, a 6-piece aluminum oven cooking set or an enameled kitchen table FREE.

Use of Personal Letters

At the beginning of the second week there was mailed out 2,000 personal letters, describing the advantages of the range they were selling and telling them of the premium offer, also giving the dates the sale was to close. A week before the sale was over they again had a one-day demonstration. This was advertised as "question day" and asked all those who had bought new ranges to attend, so as to become better acquainted with their new gas range. On this day alone 27 ranges were sold.

The sale ran 30 days, and netted 153 range sales, all sold at 100 per cent profit, and this in a town of 17,000 people with 1,500 meters.

This is only one of many sales that were successful, because they were carefully planned and carried out. One other gas company manager always runs his sales along similar lines, but allows the customer to trade old range for a certain amount on the new one. When this is done no premium is given. Another one offers a special bonus of $1 to the salesman on each range sold during the campaign. This is very successful, as it is another method of keeping up interset and keeping the sales force full of "pep," which, after all, is all that is necessary to make any sale a success.

New Ideas Hard to Find

It seems that new ideas to sell gas ranges are hard to find, and the only way to keep range sales up is

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*Delivered at the annual convention of the Southern Gas Association.

INDUSTRIAL GAS LESSONS

IF IT'S DONE WITH HEAT — YOU CAN DO IT BETTER WITH GAS

Lesson No. 80

Heat and Change of State

Kinetic Energy and Evaporation

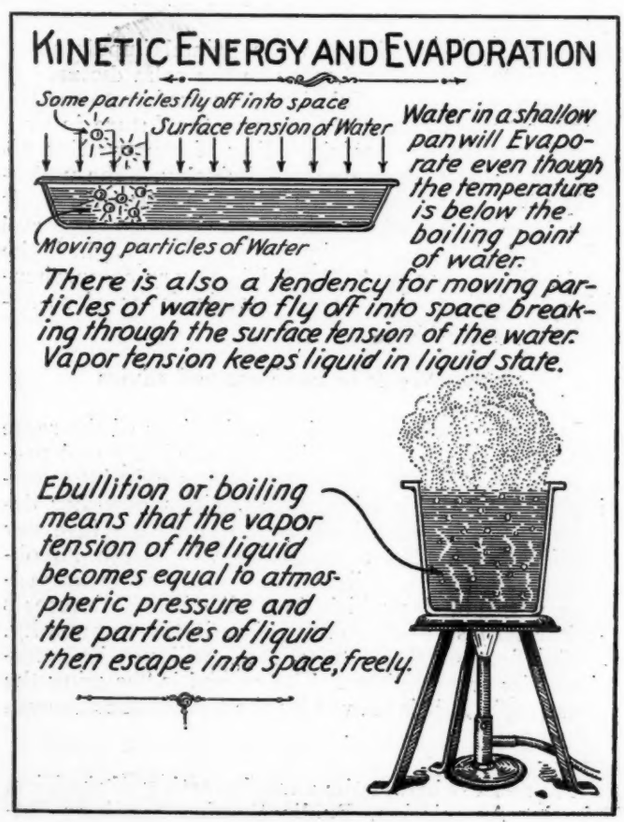
IT has been said that in order for a substance to be changed from the liquid to the gaseous state it is first necessary for that substance to attain the boiling temperature; in other words, that temperature at which the liquids are converted into vapors or gases when the proper amount of heat is supplied to take care of the latent heat of vaporization.

But it has also been noticed that liquids will evaporate at temperatures below the boiling point. For example, if a pan of water is exposed long enough to the air, the water will be evaporated and changed into the vapor state. The question can then naturally be asked, how did this evaporation take place, especially in that the temperature of the air was far below the boiling point of water, 212 degrees F., and furthermore, where did the heat come from that was required to change the water in the liquid condition to water in the vapor condition?

One thing is certain. The same amount of heat was consumed in the evaporation of the water both when the evaporation is slow at low temperatures and rapid at high temperatures. The heat was taken from the surrounding atmosphere and other bodies, but this heat was abstracted over a long period of time and the heating effect was not felt. But the required amount of heat had to be supplied.

Kinetic Energy Important

However, the kinetic energy of the particles of water is also of importance. Every liquid possesses a certain surface tension. The surface tension is a property which is related to the boiling point of the liquid. The particles of the liquid are in motion and it is natural that they should strike against the surface of the liquid and tend to fly off into the air. In fact, this does happen to a certain extent at all temperatures, but not enough to be of any account. However, as the temperature of the liquid is increased, and as this temperature approaches the boiling point of the liquid, the surface tension of the liquid, or its vapor tension, as it is sometimes called, becomes equal to that of the atmosphere and boiling takes place. Boiling is more than mere evaporation, for evaporation can take place at the surface of a liquid at any temperature to a certain degree, but boiling can only take place at the boiling temperature when the vapor tension of the liquid becomes equal to that of the atmosphere. Therefore, in reporting the boiling point of a liquid, it is always necessary to state the barometer reading. The normal boiling point of a liquid is always taken to be that temperature at which the vapor pressure of the liquid becomes equal to a pressure of 76 centimeters of mercury.


KINETIC ENERGY AND EVAPORATION
Some particles fly off into space
Surface tension of Water
Water in a shallow pan will Evaporate even though the temperature is below the boiling point of water.
Moving particles of Water
There is also a tendency for moving particles of water to fly off into space breaking through the surface tension of the water. Vapor tension keeps liquid in liquid state.
Ebullition or boiling means that the vapor tension of the liquid becomes equal to atmospheric pressure and the particles of liquid then escape into space, freely.

Co-operation Among Public Utility Companies*

The value of teamwork is paramount in the utility industry

Jay G. Mitchell

Secretary-Treasurer, Illinois Telephone Association, Springfield, Illinois

YOUR committee has been most kind in assigning me a place on this program and a subject of such eminently practical character. "The Value of Co-operation Among Public Utility Companies" is as great as the value of co-operation has been demonstrated to be in other fields of human endeavor, plus additional worth and strength due to an intimate contact with all elements of the industrial and social world that is unequalled in any other industry.

Team Work an Idea from the Ages

Any proposition may sometimes be more readily analyzed by the examination of its converse. The converse of co-operation is significantly expressed by the common antonyms of the word, which are: antagonism, competition and opposition. These words, of course, bring promptly to mind the things which co-operation is not; the things which effective co-operation will eliminate; and the aspects of the public utility industry which pride as well as enlightened self-interest would rule should be abolished.

As civilization advances the primal impulses are subordinated more and more to the calm dictates of reason and some careful observers profess to see the possibility of greater progress in the future in proportion to the successful pooling of constructive effort, including commerce and industry. The underlying idea is by no means of recent discovery. It has been endorsed by thinkers of every age and Homer said thousands of years ago that "Light is the task when many share the toil"—a very comprehensive statement of the argument in favor of co-operation in general.

Team Work in Business and Civics

Individual departmental organizations of the same concern can conserve their own efficiency and promote the objects essential to success only by working in conformity with the activities of other departmental organizations, by co-operating in every possible way. Each enterprise will attain its object most satisfactorily when conducted in accordance with policies which dovetail with the interests and activities of other enterprises in the community.

The first of these statements will not be questioned by any one here. The second is "begging the question," but it is proven by the tremendous growth and power of these civic organizations which, under one plan or another, secure the co-operation of diverse commercial and industrial interests without, in most cases, and more definite plan than the bare idea of inter-support and co-operation. Such co-operation is not and in fact, is not claimed to be altruism, it is hard-headed result-getting management.

Common Interests of the Utility Family

These general industrial enterprises with which we are all connected are, with one exception, approximately 50 years old. The exception is not material because the gas industry is itself only approximately 100 years old. It may be truthfully said, therefore, that all the public utility industries are of recent origin and have been evolved from the earliest beginnings simultaneously with the industrial revolution which followed and was caused by the invention of the steam engine. For this reason a development has taken place in these industries within the space of a few generations which is comparable with similar developments in the older industries extending over many years or even centuries.

Commonness of Interests

The services of the public utility companies are so thoroughly interwoven in the industrial and social fabric that the individual customer, as far as general policies are concerned, is entirely merged into the entire community. The rise in the standards of living in the last few decades is due to the public utility services and to medicine. They are taken as a matter of course by the individual citizen and whether we approve or not they are associated in one group in his mind. For this reason the public deals with the public utility companies, not as an individual customer of a single business, but as one of a great number of people all buying the same kind of commodity and subject to the same tastes. It is because of this public attitude that regulatory commissions are the rule rather than the exception in our business.

The condition seems to be logical and to be capable of satisfactorily meeting the situation and there is no disposition to question its wisdom, so far as I know, but it is the most insistent argument in favor of co-operation among public utility companies that could be advanced. Certainly it is unthinkable that the public may be permitted to view the agencies which supply telephone service, electric light and power, gas, water, and transportation as antagonis-

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*An address before the annual meeting of the First District Association, Public Service Speakers Bureau, Dixon, Illinois, May 27, 1925.

As The Journal Views It

ARCHITECTS' AND BUILDERS' SERVICE BUREAU

It has long been felt by those who were in touch with the building industry that it would pay the gas companies of the country to pay more attention to the architect and builder, as well as to the eventual owner of the building or home, than they have been doing heretofore. It has been seen that considerable potential advantage was lost to the gas industry by not selling itself in a thorough and businesslike manner to the architect and the builder. Actual investigations have shown that many architects and builders are not cognizant of the real value of gas as a fuel and make no provision for installing gas outlets in the homes and buildings that they plan and erect, other than those that are absolutely necessary in the kitchen.

Recently, however, increased interest has been aroused in this phase of the gas business and a few weeks ago the Sales Stimulation Committee of the American Gas Association issued a comprehensive booklet on the Organization and Promotion of a Service Bureau for Architects and Builders and other building factors.

Every gas company should have some sort of organization for co-operating effectively with architects and builders so as to bring about conditions that are favorable to the proper installation of gas appliances. The advantages that are being gained from such work are many. Of course, the underlying purpose is to increase sales of gas appliances and of gas itself. But, in addition thereto, by organizing and operating an Architects' and Builders' Bureau, the gas company is simply affording the public at large an example of its desire to give a distinct and unique service to its consumers. For, in making the architect, and the builder, and the plumber, and the real estate operator as well, realize that from this Bureau of Information they can obtain all necessary data on the use of gas for various purposes in the home, the gas company creates a state of mind which will result in none of these factors in the building industry undertaking any gas installation wthout first consulting the gas company.

The advantages of such a state of affairs are apparent to every commercial man and to every gas company. For, in the first place, it offers a sure way of preventing the influx of improperly designed cheap gas appliances, which give poor results and which always lead to criticism of the gaseous fuel used in them, rather than of the apparatus itself.

This is, in fact, one of the most serious conditions that the gas company has to deal with. The sale of gas-consuming appliances by department stores and other dealers, who are generally concerned only with making as much profit as possible, and are not paritcularly interested in whether the appliance is well made and will give proper satisfaction or not, has been a source of great trouble to the gas company. It is not that the gas company objects to the sales as such, but it does object to irresponsible parties going into this business and making considerable trouble for it after the appliances have been installed. It is a fact, that has been substantiated many times in actual work, that when such appliances do not give satisfaction, it is not the appliance that is to blame, but the gas, and it is very difficult, if not impossible, to convince the average gas customer that the fault lies with him in not going to the gas company to buy the appliance, instead of purchasing it from some irresponsible dealer.

The Archtects' and Builders' Service Bureau will have a very potent effect in bringing this serious problem to a real solution and after its efforts have become known to builders and prospective purchasers as well, the appliances not recommended by the gas company as being the proper ones to use will not be purchased, and a great deal of trouble will be avoided. Thus it may be said that if this were the sole advantage to be gained from establishment of such a bureau, it would be very much worth while doing so.

Furthermore, the organization of a distinct bureau crystallizes the efforts of the company in this particular field. It avoids haphazard solicitation among the architects and builders which can only have bad results. When the work is properly organized and the building interests are approached in the proper manner the interests of the gas company are looked after and results should be unquestionably satisfactory.

The Summer Slump

How about it? Are you all set to slam it?

William H. Matlack

AFTER the Fourth of July you begin to hear about a thing called "The Summer Selling Slump." Some sales managers attribute this slump to the fact that a great many folks take their vacations about this time of year, others say, "well, when it's hot, people just won't buy." And then there are other things that are given as a reason for the so-called slump—but the real reason is—now let's be honest—that with the coming of the late summer, don't we just sort of let down? Don't we by habit get into a state of mind that causes us to feel that the line of least resistance is the best policy to pursue—while it's so all fired hot? After all, isn't the summer slump about 75 per cent chargeable to a state of mind?

It is true that folks go on vacations during July and August, but we have never heard of a whole town taking a vacation at once. Then, too, even if folks go on a vacation, they have to eat, they have to use hot water, and there are always a few left at home that will buy new appliances—if someone will work up enough vitality and vim to sell them.

Staging a Sale to Offset the Summer Slump

One of the Southern gas companies, that has been in existence for about 52 years, staged a sale to offset the summer slump last year, starting the 23rd day of August and closing the 27th day of September. That sale was a knockout! This company up to that time was of the opinion that there was no use trying to sell folks so long as old Sol was bearing down on them, and the thermometer registered in the nineties.

The company in question opened up with an odd cent sale, a low down payment and a long divided payment plan. The result was that the plan went over so well that at its close and with a week's intermission it opened up another sale in which a premium was given to all purchasers. Here's what they did in the way of sales in a city of 50,000, where there were 5,000 meters in use:

AUGUST

	23	25	26	27	28	29	30
Ranges	3	5	8	3	3	7	4
Tank heaters	0	2	0	1	1	2	1
Automatics	1	1	0	1	0	0	1
Instantaneous	.	.	.	1	0	0	1
Room heaters	.	.	.	1	0	0	0
Hot plates	0	0	0	0	0	0	0

SEPTEMBER

	1	2	3	4	5	6	8	9	10	11	12
Ranges	5	8	4	2	4	9	3	3	4	2	3
Tank heaters	0	0	0	2	0	1	1	2	2	1	2
Automatics	0	0	1	0	0	0	0	1	0	0	0
Instantaneous	0	0	1	0	2	1	1	0	0	1	1
Room heaters	0	0	0	0	0	0	0	0	0	0	0
Hot plates	0	0	0	0	0	0	0	0	0	0	0

13	15	16	17	18	19	20	22	23	24	25	26	27	30	Totals
2	7	8	0	6	8	3	6	2	6	7	4	3	6	148
0	1	3	1	1	0	1	1	0	3	2	1	0	1	37
0	0	0	0	0	0	0	0	0	1	0	0	0	0	7
1	3	2	1	2	1	0	3	1	1	4	0	3	0	32
0	1	0	3	0	0	0	1	0	1	2	0	0	1	6
1	0	0	0	0	2	0	0	0	1	0	0	1	1	5

The Results

This sale with its total of 148 gas ranges, which ranged in price from around $50 to over $100, and its 76 water heaters, goes to show what can be done to slam the summer slump. This company circularized the town, advertised the sale by the use of gas bill stickers, store and truck banners and store and window displays, tieing all this advertising into the regular newspaper space used in both morning and afternoon papers. The company had no extra salesmen, but by paying the men in the distribution department a bonus on sales, made to prospects turned in by them, it was kept busy following up LIVE leads rather than working on a lot of people who had no idea of buying or perhaps had no money with which to buy or who might be on their vacation.

Some such plan as this is usually the answer to the time-old question, "what can we do to get some summer sales?" Another feature about a summer sale is that it always furnishes a lot of live leads for the early fall. Many water heater and house heating prospects have been developed by summer snooping. From any angle, a summer sale is worth all it costs and a great deal more, if it only dispels the idea that there's no use trying to sell during the hot months.

Some of the gas companies are using newspaper space to promote fall heating business right now, while others are boosting canning for late summer and early fall. Both are good ideas and both may be tied into a summer sales campaign. Why not try about 250 lines down one column like the advertisement shown in the accompanying illustration, to help lay to rest the summer sales slump bogey?

PROGRESS IN GAS TECHNOLOGY
Domestic and Foreign

COKE

THIS is the title of a publication issued by the Canadian Department of Mines in Ottawa. It discusses the use of coke as a household fuel in Central Canada.

The publication deals with the fuel situation in detail and devotes considerable space to the description of domestic coke, marketing of the fuel, sizing the coke. It also discusses market for coke for industrial purposes and for gas.

A large part of the publication is devoted to the discussion of Canadian market for central station gas as well as for the various by-products that are developed in its manufacture. Still another section is devoted to the description of the manufacture of by-product oven, retort and water gas. The publication is profusely illustrated with photographs and contains considerable tabulated data.

CARBONIZING RETORT

THE carbonizing apparatus comprises a retort for receiving the material to be carbonized, a shaft mounted for rotation in said retort and extending the entire length of the retort, said shaft being

of such cross-section as, by its rotation, to form and maintain open a continuous passageway through the material in the retort, and means for imparting rotary motion to said shaft.—U. S. Patent No. 1,530,896.

INFLUENCE OF STEAM IN GAS PRODUCERS

THE assumption that equilibrium is attained in the Dowson producer is attacked on the ground that the time of contact between the air and steam and the coke is far too short, in relation to the reaction velocities. In the bottom zone of the producer, the steam acts as an indifferent gas, the carbon being oxidized by oxygen only to the dioxide; in the upper zones both reactions $CO_2+C=2CO$ and $H_2O+C=H_2+CO$ proceed, but as these are endothermic and have only low reaction velocities as the temperature falls, they may not proceed to completion; hence carbon dioxide or steam or both may be present in the issuing gases.

From consideration of the heat balances for temperatures above 1100 degrees, assuming these reactions proceed to completion, it is deduced that the proportion of steam which may be decomposed falls as the temperature rises, the theoretical maximum being 0.264 kg. of steam per kg. of air, at 1100 deg.—Chem. Weekblad, 1925, 22, 66—73).

INFLUENCE OF ROTARY OVEN DESIGN ON THE COMPOSITION OF LOW-TEMPERATURE TARS AND GAS BENZINES

A NEW type of rotary oven is described in which the coal enters an inner cylinder at the bottom, passes up a spiral conveyor (through the rotation of the whole), and, near the top, falls into the space between the central and outer cylinders, and passes out at the bottom. The gas and tar issue at the top of the oven. In this way the coal is dried and preheated in the central cylinder before being actually carbonized in the outer and the gas and tar do not come into contact with coke at a high temperature. The oven is evenly heated by a mixture of waste gases and hot flue gases obtained by burning producer gas in a separate combustion chamber.—Brennstoff-Chem., 1924, 5. 388—389.

SWELLING OF COAL DURING COKING

THE degree of swelling of a coal is determined by the ratio of the apparent absolute volume of the coke to the apparent absolute volume of coal. Experiments were made on 1-g. portions of coal using a platinum crucible and a furnace, electrically heated. The apparent density of the coke was determined, using sand. It is shown that an increase in the velocity or in temperature of coking decreases the degree of swelling: at 700 degrees with a caking coal it is 9.50 degrees, and at 1000 degrees 3.16. Diminution in the size of the coal particles from ¼ n. to 1/180 — 1/520 n. increases the degree of swelling from 2.37 to 6.22. The swelling is reduced by an increase in the compression of the coal prior to carbonization.—(Brennstoff Chem., 1925, 6, 17—19).

Selling Good Will

Satisfying complaining customers by selling them service

J. E. Bullard

IT is sometimes surprising, the things on which good will really hinges. "I understand they have gas burners for heating houses," a man remarked the other day. Then, after a little discussion on house heating with gas and all the advantages of such heating, he said:

"But I think I'd rather rely on an oil burner to heat my house than to depend on the gas company. We had to wire our house for electric lights because we couldn't get any gas. No, I don't think I'd want to heat my house with gas. I don't like those fellows over at the gas company, any how. They're an unsatisfactory lot."

Knowing the gas company as well as he did, knowing that during the past few years it has created a surprising amount of good will, the person who was talking with this man could not at first understand this attitude and, accordingly, made some inquiries in order to get at the root of the matter. Before the conversation was over it became apparent that the main source of trouble lay in the house piping itself. Had the gas company sold this man an entirely new piping installation in the house he owned, and which was piped some thirty years ago, that man would still be a good customer of the company.

Studying Complaints

Some New England gas companies have found it very profitable from a house heating point of view to make a study of the complaints made in regard to poor gas supply, find out the real source of those complaints and then correct them. If the trouble is with the mains or the services, the company remedies the trouble. If it is a case of defective house piping, and it usually is, then the best salesman in the company starts out to sell a new piping installation.

Apparently it is not possible to secure the greatest possible good will from a complaining customer without selling that customer something. At least, when the customer has spent some money he will try harder to be satisfied than he would if the company alone was spending money in the effort to give him fairly satisfactory service through inadequate house piping.

Customer Must Be Satisfied With Service

The importance of making the customer thoroughly satisfied with the service is indicated by the manner in which this consumer views house heating. Had the service been satisfactory, had the company sold him a new piping installation or the changes necesasry to make his present piping satisfactory, he would be enthusiastic about house heating. As it is, he leans strongly toward electricity and oil, not because he favors them so much as because he feels antagonistic toward the gas company. Had he company been a combination company, selling both gas and electricity, then, of course, he would have felt more or less ill will toward both services. It is doubtful if, under such circumstances, he would have been satisfied with his electric lights. He would have been pretty sure to take the stand it was all a case of trying to get more money out of him.

Sell Dissatisfied Customer Service

The best way to sell good will to any dissatisfied customer usually proves to be selling him some kind of service or merchandise he has not bought. A woman keeping a boarding house and threatening to have her meter removed because of high gas bills was called on by a salesman.

She told him how unsatisfactory the gas service had been and how high her bills. He explained to her that perhaps more modern gas appliances was what she needed. In the end he succeeded in selling her some new appliances. These gave so much better results than her old appliances did that she did not mind the gas bills so much, though they were not very much reduced.

An industrial gas fuel user was finding gas so unsatisfactory that the decision had about been made to try some other fuel when the industrial gas salesman began showing some of the very latest gas appliances and systems for doing the work this concern had to do with heat. By working along these lines a sale totaling several thousand dollars was made, the gas consumption of the consumer very materially increased and a good friend made for the company. It required making a sale to this customer, however, in order to satisfy him.

Another Constructive Example

A public utility salesman one day dropped in to see a customer of his company. His welcome, to say the least, was not cordial. He heard more bad things about his employer than he had heard in the same length of time ever before. Had he believed them he would have expected to find all the officers of the company behind prison bars within a very short time.

After the customer had gone on so long he had to pause for breath, the salesman began asking questions. He discovered there was a real need for a

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INDUSTRIAL GAS BUSINESS HAS LIGHTER SIDE

(Continued from page 70)

light of the latest information which is furnished.

The writer has before him one letter which was apparently sent out broadcast a few years ago to describe the superlative merits of a form of hardening furnace which permitted the charge, "after hardening in the furnace chamber," to be dropped into a quenching tank "without touching air," but it is unfortunately silent upon the point why the quenching tank should be required, if the charge is (as the letter so definitely states) hardened in the furnace!

Aluminum

Somewhat upon a par with the metallurgical information quoted above was the statement vouchsafed to one non-ferrous foundry, who in reply to an inquiry as to the cost of a plant for dealing with a certain weight of aluminum per hour were informed by the furnace maker that "aluminum is lighter than brass." Such information, as expressed, calls to mind the old conundrum whether a pound of feathers or a pound of lead is the heavier.

But aluminum is a metal which has many surprises for the newcomer to the foundry or to the furnace trade, not the least of which is the consumption of fuel for melting as compared with the cost of melting other metals of a higher temperature of fusion. During the early stages of the war, when the demand for aluminum developed so prodigiously, it was a common occurrence to find both inventors and furnace makers in certain of the Allied countries calculating probable fuel consumptions merely from a consideration of the melting temperature, and assuming that as the melting point of aluminum was about three-quarters that of brass, the fuel consumption would be proportionate.

Air Compressors

It is not only the gas man and the consumer who have cause to regret the incursion of a new and inexperienced maker into the industrial gas field. The general effects of such experiments are frequently felt very far afield. The sales manager of a company manufacturing air compressors tells the story of how a reciprocating air compressor capable of giving a minimum of 20 pounds per square inch was ordered by one small maker, who, after discovering the ease with which it was possible to extemporize a rough Bunsen burner out of a piece of gas tubing, had been pursuing his experiments with the slightly more elaborate arrangement for air-blast. The compressor was returned to the makers as being altogether unsatisfactory, although a careful examination and test showed that it was in perfect order. A little later on, some careful inquiries showed the interesting fact that this particular inventor had not yet learned the difference between volume and pressure in air compressor work. His experience with the first furnace he had built fitted with a single air-blast burner he had managed to contrive showed that this required an air pressure of two pounds per square inch for satisfactory functioning, and as he was applying the system to a very much larger furnace needing eight or nine similar burners, he had somewhat too hastily assumed that these burners would therefore require eight or nine times the air pressure —with the result that an unfortunate air compressor manufacturer was saddled with the return of a perfectly sound machine.

The increasing interest which gas men all the world over are taking in the industrial field will undoubtedly do much to insure that this trade is developed on sounder lines than was the case up to the last few years; and if the efforts of the gas companies to guide the demand into safe channels should have for result the gradual cessation of the more striking efforts of misguided inventors, few will be disposed to mourn their disappearance. Though the gas industry may be the poorer by many a good story, it will be the sounder by development upon regular and well-tried lines.

To the Business-Girl Bride:

Will your kitchen be as efficient as your office?

THOUSANDS of young women this spring are graduating from the office into homes of their own. They've learned to systematize their business duties and make use of every possible labor-saving device. Office work hasn't been drudgery to them and neither should housework prove tedious.

Special Bride's Kitchen Display This Week

(*Describe Here*)

If you put as many gas appliances into your kitchen as you have typewriters and filing cabinets and stamping machines in your office, housework can be just as pleasant as office work.

Easy terms make it possible for you to completely equip your kitchen without the immediate sacrifice of pretty things you want for other parts of the house. Bring "him" in to see this display. We're open Saturday night until 00 o'clock.

[Your Name and Address Here]

A.G.A.-419

Appealing to the Woman in an Intelligent Manner

A CAMPAIGN FOR GAS RANGES

(Continued from page 72)

to use a borrowed expression, "see 'em, tell 'em, sell 'em!"

There are a great many inducements to offer to get the customer to buy during a sale that have been used time and again and always prove successful. These are so well known to the gas industry that I will not go any farther into this than to say that it seems a trade-in value on the old stove or a premium offer still seem to be the best.

I work for a company which feels that our work has just begun when the ranges are in the gas company's warehouse, and that it is up to us to help it sell them. We have worked out a number of sales plans and tried them out with varying success. It is, however, the opinion of the company that nothing sells ranges like a demonstration. Of course, it depends on how this is put on, and what method is used to get the ladies to attend. But if it is given the proper publicity and conducted properly, it will make more range sales than anything else. However, like a sales campaign, it must be carefully planned and carried out, if you are to get paid in attendance for the money you have spent in advertising and, by advertising, I don't mean just what space you use in the newspapers, for any kind of publicity you get must, after all, be credited to the advertising department.

Advertising a Controlling Factor

Advertising can make or break any sale that was ever started. Advertising properly done is one of the biggest factors, not alone in your sale, but in the steady upbuilding of your gas range business and the steady increase in the gas load. It is my opinion that constant and intelligent advertising will do more for a gas company than any one thing it can do, except give good service. Advertising to be helpful must, above all things, be honest, and when a certain offer is made in an ad it should be a bona fide offer, and when a sale is advertised to close on a certain date, it should not run a day longer. This will make the public understand that when you say a thing you mean it, quicker than anything else the gas company can do.

Essentials of a Properly Conducted Campaign

Running a range campaign is just like anything else. You get out of it just what you put into it. A carefully planned and well conducted campaign is always a success. A sale that is put on in a haphazard way is generally non-productive. So we will say that the proper way to conduct a campaign would be:

First: Carefully consider the best dates to begin the sale. When there will be nothing going on in the town to interfere with it, and when the weather is suitable, and to be sure your dates include pay day, that is, the day when most of the people get paid off in the town.

Second: Go over your prospects and decide how many ranges can be sold and buy them—for no one wants to wait until a range comes from the factory after they have bought it.

Third: Decide how much you can spend for advertising and how it is to be distributed: so much to the windows, and for banners on the outside of the office, newspapers, so much for signs on the trucks and for printing personal follow-up letters and invitations.

Lay out the advertising, get it all ready to go to the papers and date each ad, so there will be no hitch after the sale gets under way. Get the invitations ready and have them addressed and ready to mail out. Do the same with the follow-up letters. This should all be done well in advance of the opening date of the sale.

Decide on the Premium

Fourth: Decide on a premium. Try and get something useful, something that has not been used before. The cost of this need not be included in the cost of advertising, for the cost of the premium should be carried on the ranges all the year around, to keep you from losing profits, and to keep from having to change the price just before the sale. This can be used to allow a trade-in all during the year, when it is the only way to make a sale. This trade-in should be used only as a last resort and in this way you will not have it as an established fact that you allow a trade-in value all the time.

Demonstration Is Important

Fifth: Give a demonstration of the range you are featuring. Be sure it is well conducted and is of a really helpful nature, so that the ladies who come on the first day will come back to all of them. Demonstrators should be thoroughly familiar with the appliance and be able to make a sales talk along with the demonstration in such a way that it will be only a part of the cooking lesson, and not seem as if you were trying to close sales at the cooking school. This sometimes drives away attendance.

I cannot stress too strongly the importance of a demonstration. This is the "ace in the hole" and will do more to make the customers want a new range than anything else you can do.

Sixth: Devise some plan to keep the entire force on their toes during the sale. Offer a bonus for prospects, or a prize to the one turning in most, and possibly a bonus to the salesman for every range sold during the campaign. I believe the bonus works out best, for then every one has a chance and the entire organization is talking range and talking sales, and no advertising snow balls as quickly as mouth-to-ear, or, in other words, backyard advertising.

In closing, let me say this—don't put on a range campiagn unless it is carefully planned, and is sure to "carry through." It is a waste of money to put on a poorly conducted sale.

CO-OPERATION AMONG PUBLIC UTILITY COMPANIES

(Continued from page 74)

tic, competitive, or opposing in respect to each other, without doing damage to the consistent satisfactory relations with the public which are so essential to success and good service.

The Public's Interest

The very character of the public utility business has developed an intimate interdependence with the industrial and social life of the community. This has interwoven the interests of the customers of the public utility companies on the one hand with the interests of the company itself on the other. Because of this the public has an intimate interest in the details of management and operation. This fact affords one of the most impressive arguments in favor of co-operation because it is a condition pertaining to all public utility enterprises without exception. Any public utility company may well see that its public is fully advised as to the similarity in the essentials of operation of all public utilities, except for certain arithmetical points of divergence in plant values and rate structures; that it is advised regarding the enormous capitalization required, the inevitably slow turn over, the stable revenues, and the market unaffected by adverse general conditions.

An Aid in Financing

The stock and securities of all public utility companies have proven themselves to have certain inherent elements of strength not duplicated by the stock and securities of any other industry. Investors, both large and small, are assuming financial interest in the public utility companies for this reason. These qualities are found in the industry as a whole and are due to the character of the business. Because this fact is bound to result in a more complete association of these enterprises together in the investor's mind and because the problems of management and operation, speaking generally, are identical, co-operation in every possible way would seem to be not only advantageous but imperative.

Informing Public a Co-operative Task

The advantages of co-operation among public utilities, therefore, are those advantages which may most fully develop by the intensification of logical and tried policies, and the policies that have been found to be logical and have stood the test in one public utility company may, in most cases, with very simple modification, be found effective when applied by another. One of the most obvious channels through which such co-operation may be realized is the consistent presentation to the public of the essential facts common to the entire industry.

The general public is entitled, because of its intimate interest, to the most complete and accurate information that it is possible to impart. This is true when the public is viewed as the consumer of the product and the source of the revenue. It is also true because the public is not only the consumer of the product and the source of the revenue, but also the owner of the stock and securities to a constantly increasing extent. One of the advantages of co-operation among public utility companies is the added weight accorded to the popular endorsement of the public utility as an investment when the companies co-operate effectively in presenting the merit of their stock and securities.

Advantages in Local Management and Operation

Co-operation among public utility companies operating in the same territory will be found to be of tremendous value in matters of local management and operation. In such cases numberless concessions may be made without delay and with the result of reduced expense. It is in the field of local operation that the greatest material benefits can be demonstrated by co-operation, but it is in the general field of public utility operation and management that the greatest and most valuable intangible results may be realized.

Well Organized to Tell Our Story

In the few minutes at my disposal it would be presumptuous to make any attempt to outline a practical co-operative program, but the general features underlying such a program are so simple as to require no specific mention at this time. In Illinois the machinery for co-operative action is available to every utility, large and small. This machinery has achieved a very notable success in the field of constructive publicity. The Illinois Committee on Public Information, which is about six years old, started from very small beginnings and pioneered the way for the whole industry until its general plan has been adopted in 27 other states.

In addition to the Illinois Committee on Public Utility Information there is the Public Service Speakers Bureau, of which this is a district meeting. This agency affords the finest possible opportunity for initiating and buildng up a co-operative relation between the various public utility executives. One of the prime advantages of co-operation will have been realized when the several companies in a given territory shall have broadened their mutual contact through the participation in the activities of the Public Service Speakers Bureau. This advantage will be the result of acquaintanceship and of acquired familiarity with the problems faced by the other fellow.

SELLING GOOD WILL

(Continued from page 78)

new appliance. He showed what the possession of this appliance would mean to that customer. By using a little diplomacy in his sales talk, he succeeded in selling it provided it was put in and the profit made by some other concern than the company. This was arranged, the appliance installed, the monthly bill more than doubled, and the customer pleased. It was just a case of selling good will by selling something that was needed and the use of which would make a real friend of the company.

The Piping Trouble

A good many gas companies are well on toward a hundred years old. Gas piping and appliance installations have not always been supervised as carefully as they should have been. Some piping and appliances have been in use so long as to be worn out. Some were never properly installed, any way, for few gas companies have been able to take care of all this work themselves. People move into town and bring their appliances with them. Some building contractors have built to sell and have given more attention to outer appearance than to real quality and future service. There has also during the past few years been a great improvement in the gas appliances being placed on the market.

If good will is desired, it pays to turn the chronic complainers over to the best salesmen and let them sell some good will. The mere fact that a person complains shows that he wants to continue to use gas. If he didn't want to use it, he would simply quit, use something else and never say anything about it, at least to the gas company.

New Appliances Necessary

Much the same holds true in regard to appliances. If those in use are out of date or worn out, the customer will never be satisfied until he is sold new and modern ones. Sometimes the customer feels that he has a real cause of grievance because, instead of selling the new appliances at once, the gas company has spent a good deal of time and money trying to help him make those he has answer the purpose.

Sell the complaining customer something newer and better and you sell him good will for the gas company at the same time. Fail to do this and the chances are good that he will become more and more dissatisfied.

A pretty good policy to adopt as far as good will is concerned is that every complaining customer wants to buy something but doesn't know just what it is, and that the salesman should follow up this person, find out what the thing is and then sell it. If the work is rightly done, these complaining customers then become boosting customers, for the more money people spend with any company and the more they increase their expenditures provided they feel they are getting their money's worth, the better they like the company.

GAS COMPANIES OPEN NEW FIELD FOR WOMEN EXPERTS

A new profession for women is rapidly entering the foreground of feminine activities, largely as the result of the new impetus given to home service work by the gas companies. Approximately 50 gas companies now have home service departments and others are adopting the idea every month. Each of these departments has a woman director at its head and in many cases she has anywhere from one to half a dozen assistants.

Universities and women's colleges giving home economics courses at the same time report a rapidly increasing demand for these classes on the part of the students. The 1925 class in the Home Economics School at Cornell University, which was a pioneer in this field 25 years ago, will graduate 80 trained young women this year, says Miss Martha Van Rensselaer, director of the school. There are about 600 students in the school at present, while through the Home Bureau some 65,000 women will have received instruction in extension work.

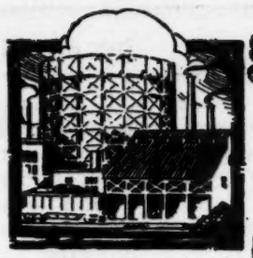
Home making is looked upon here as a science rather than a necessity.

"There has always been a mistaken opinion in regard to housework," Miss Van Rensselaer says. "It has been considered drudgery. Housework, when it applies modern art and science, ceases to be an occupation and becomes a vocation. It is of as much interest and as important for a woman to keep the kitchen sink clean as it is for a surgeon to wash his hands and use sterilized instruments.

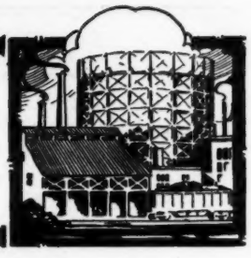
"If the woman who is setting her table would see that a principle of art underlies what she is doing, the work would cease to bore her. Even the most menial task to be performed in her house is part of the life of her family; upon the food she gives her children depends their future health.

"The average woman likes to draw a line between her household duties and her spiritual life. There is no differentiation. Housework is spiritual."

The Gas Range in a Very Fine Kitchen Display



NEWS OF THE GAS INDUSTRY



18th Annual Convention Proves Real Success

Canadian gas men hear interesting papers

(By Special Correspondent)

A Canadian Gas Association convention means much more than a meeting place where one can hear papers read or discussed. To many of the delegates who attend it is a means whereby they can get together and go over with one another the many questions and problems that confront them in their every-day work of gas making.

The recent convention of the Canadian Gas Association, held at Quebec City, July 15 and 16, was not a whit behind its previous meetings in this regard, and, besides, it is considered a real success from almost every angle.

The attendance was up to standard, many delegates having come long distances to be on hand, and about 90 arrived at Quebec City.

Following the convention, quite a few of the delegates went on to the famous Saguenay River, expecting to return home later via Montreal, thus making the boat trip and convention a sort of vacation event.

Wednesday Meeting

Sharply at 10 a. m., Wednesday, July 15, President E. R. Hamilton called the meeting to order and proceeded with the work of the association.

Secretary G. W. Allen read his report for the past year, showing the association to be in a sound position financially. He also read the report for the year of the executive committee, most of it having to do with the coal tariff question affecting the gas companies of Canada.

One of the best addresses concerning the development of the gas industry ever given by a president of an association was that delivered by E. R. Hamilton, the retiring president.

Mr. Hamilton is to be congratulated for the manner in which he has conducted the affairs of the association during the past year, and for his encouraging words given in regard to the future of the industry.

New Officers

A nominating committee for the election of officers and directors for the ensuing year was elected, to report to the afternoon session. The later report, showing the following slate, which, when put to the general meeting, was adopted:

Officers, 1925-26

President—J. J. Humphreys, engineer of gas manufacture, Montreal Light, Heat & Power Company, Montreal.

Vice-president—P. V. Byrnes, president, United Gas & Fuel Company of Hamilton, Ltd., Hamilton, Ont.

Second vice-president — J. J. Armstrong, secretary, Consumers Gas Company of Toronto, Canada.

Secretary-treasurer—G. W. Allen, of Astley ave., Toronto, Ont.

Members Executive Committee

J. S. Norris, vice-president and general manager, Montreal Light, Heat & Power Company, Montreal, Quebec.

Arthur Hewitt, general manager, Consumers Gas Company of Toronto, Canada.

J. M. H. Young, superintendent, City Gas Company, London, Ont.

C. C. Folger, general manager, Public Utilities Commission, Kingston, Ont.

V. S. McIntyre, superintendent, Kitchener Light Commissioners, Kitchener, Ont.

A. A. Dion, general manager, Ottawa Gas Company, Ottawa, Ont.

R. A. Wallace, superintendent gas department, Quebec Railway, Light & Power Company, Quebec, Canada.

C. A. Jeffries, superintendent of gas manufacture, Consumers Gas Companyof Toronto, Canada.

The Program

The convention papers' program consisted of 11 splendid papers, mostly technical, all well thought out and prepared by men whose reputation in the gas field for the many contributions they have given in times past in aid of the gas industry.

The meeting was divided into three sessions and a dinner.

Papers read the first day consisted of the following:

"Coke Ovens in a Canadian Gas Works," being an excellent production on the operation and control of the Hamilton By-Product Coking Plant, Ltd., of Hamilton, Ont.

This paper, which was prepared by Mr. Joseph Stephenson, M. E., engineer of the plant, came in for a deal of discussion.

Harry D. Schall, the well-known and popular gas appliance man, now vice-president in charge of sales for the Standard Gas Equipment Corp., New York, read a splendid paper on the "Value of Hotel and Restaurant Equipment Business to a Gas Company."

Mr. Schall gave many valuable suggestions to gas managers on how to obtain this class of business and strongly emphasized the importance of industrial surveys. Know your territory and its possibilities and then go after the business, were the keynotes of his paper.

Welding of Gas Holders

"Electric Welding and Design of Gas Holders," by George T. Horton, president of the Horton Steel Works, Chicago, proved to be a very instructive paper on the possibilities of electric welding in the construction of gas holders and other equipment of a gas works. Some of the delegates, in discussing the paper, were doubtful as to how far welding should be carried in the building or erection of gas works equipment, but admitted that it had its place in the modern gas works. In the absence of Mr. Horton, his paper was read by C. H. Scheman, general manager for the Canadian Company.

In the unavoidable absence of

Mr. Hugh McNair, manager gas utility, Winnipeg Electric Company, Ltd., Winnipeg, Canada, his paper on "Coke Ovens in a Medium-Sized Gas Works," was read by the secretary.

Mr. McNair gave a brief review of the old conditions under which his company had operated previous to the installation of several Koppers units of coke ovens. He also gave a report on the experiences he has had during the six months prior to his preparation of the paper.

The discussion of this paper was undertaken along with that of Mr. Stephenson's contribution on the Hamilton Ovens.

Mr. Fred Wagner, chief engineer, Bartlett Hayward Company, Baltimore, Md., gave a very excellent address, illustrated by lantern views, on the "Development and Construction of Waterless Gas Holders." He said there was a place for such holders and numerous companies were beginning to understand something of their usefulness.

Thursday Meeting

The second day's session was covered by the presentation of the following papers:

"Notes on Recent Plant Extensions at Montreal,' being a careful review of the construction and operation of the new water gas plant at Montreal, Canada. Mr. H. N. Osler, superintendent Station "B," LaSalle Gas Plant, Montreal Light, Heat & Power Consolidated, Montreal, Canada, was the author of the paper. Approximately 30 lantern slides were used by Mr. Osler to further explain his paper.

A paper that covered some experiences in the process of heating vertical retorts with coal gas was next in order, it being one prepared by Mr. Frank Elcock, superintendent of the Gas Works, Ottawa Gas Company, Ottawa, Ont. Mr. Elcock gave an account of his past year's experiences in this method of heating retorts with coal gas.

Mr. R. A. Wallace's paper, entitled "Back Run Results at Quebec," showing his experiences in the operation of the back run process as applied to water gas, also experiences in the use of bituminous coal, proved to be of real interest to many delegates who are considering the extension or improvement of their water gas operations.

Mr. Wallace gave his hearers the benefit of many charts he had prepared containing actual costs of operation, savings effected through the use of the back run process, etc., all of which will prove profitable to those who can make use of them.

Not only the larger companies, but also a number of the smaller ones, or, in fact, any companies considering the balancing up of their distribution pressures, will, or should, be vitally interested in the paper entitled "High Pressure Belt Line and District Governor System of Distribution," which was delivered by Mr. J. D. Von Maur, engineer of distribution, Consumers Gas Company of Toronto.

An Evening at Kent House

Wednesday evening the gas delegates were taken by special sightseeing cars to the Kent House, in the historic village of Montmorency Falls, seven miles below Quebec City, where are situated the famous waterfalls, now made use of by the Quebec Power Company. Kent House, where the convention dinner was held, was once the residence of the Duke of Kent, father of Queen Victoria, who at one time was a Governor of the then Lower Canada. On this occasion an informal dinner was laid out for the gas men and their friends, somewhere in the neighborhood of 115 sittings having been arranged for. Many well-known gas delegates were in attendance, among whom might be mentioned Mr. and Mrs. Alfred Forstall, New York; William M. Crane, New York; Mr. and Mrs. Frank F. Cauley, Chicago, Ill.; Mr. Fred Wagner, chief engineer, Bartlett Hayward Company, Baltimore, Md.; Mr. and Mrs. J. V. Von Maur, Toronto; Mr. and Mrs. C. S. Bagg, Montreal; A. A. Dion, Ottawa, Ont.; Mr. and Mrs. E. R. Hamilton, Halifax, N. S.; Mr. J. J. and Miss Armstrong and Mr. C. A. and Miss Jeffries, of Toronto; Mr. and Mrs. F. J. Kennedy, New York; Leigh Wickham, St. Louis; J. L. Nichols, Philadelphia; Mr. and Mrs. W. A. Cameron, Philadelphia; Alexander Forward, secretary-manager, American Gas Association, New York; Miss Ada Bessie Swann, Newark, N. J.; Mr. and Mrs. H. E. G. Watson, Mr. and Mrs. E. J. Tucker, W. B. Johnson, of Toronto; Joseph Stephenson and Mr. J. B. and Miss McNary, of Hamilton, Ont.; Mr. and Mrs. R. A. Wallace, Quebec; F. S. and Mrs. Knapp and Mr. J. T. Brill, Pittsburgh; A. E. Robertson, Fort Wayne, Ind.; Mr. and Mrs. S. G. Krake and family, also Mr. H. D. Schall, New York; Charles W. Crawshaw, Chesterfield, England; J. M. H. Young, London, Ont.; Mr. Robbins, New York; Mr. W. Russell and Mrs. Greer and daughter, Baltimore; Major J. J. Humphreys, Montreal; S. B. and Mrs. Severson, Buffalo, N. Y.; J. S. and Mrs. Tatman, Connersville, Ind.; Mayor George C. Drew, Guelph, Ont.; H. Williams, J. W. Oakes and Hugh McHugh, of Guelph, Ont.; J. W. Danaher, Toronto; George H. Clarke and V. S. McIntyre, Kitchener, Ont.; C. H. Scheman, George Hobbs and G. W. Allen, Toronto; C. D. Slimpin, H. N. Osler and R. J. Lockhart, Montreal, and many others.

Toasts to the King and also, out of courtesy to the American visitors, to the President of the United States, were given, followed by community singing and special singing and entertaining by Fred Evans, of the Canada Steamship Lines, Ltd.

Home Service

One of the special features of the evening was an address on the value of home service to gas companies, delivered in an entertaining and delightful manner by Miss Ada Bessie Swann, director Home Economics Department, Public Service Gas & Electric Company, Newark, N. J. Miss Swann is a well-known home service organizer, and has been doing some very valuable work as chairman of the Home Service Section of the American Gas Association. Her talk to the Canadian Association, especially at the dinner party, was well received by all in attendance.

Major Forward Delivers Address

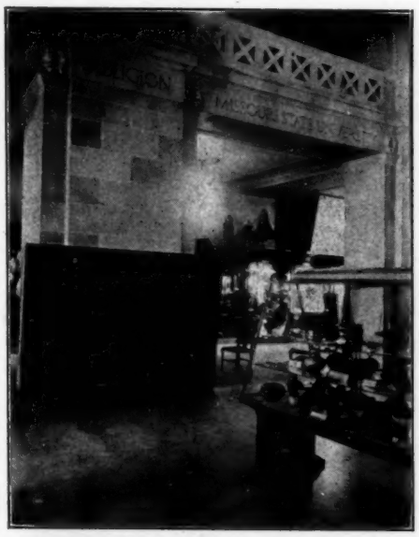
Major Alexander Forward, secretary-manager for the American Gas Association, also delivered a splendid talk to the dinner party, his address being entitled "Mankind's Greatest Discovery." Major Forward covered the early day, present and future developments of the gas business, and endeavored to prove that the discovery of gas is to prove the greatest blessing of mankind.

The sight-seeing trip for the ladies of the party covered a drive to the famous shrine of St. Ann de Beaupre, and about the city, but the general sight-seeing trip slated for Thursday, July 16, was called off owing to wet weather which had set in.

The year ahead promises to be a banner one for the association and there is every prospect that the next meeting will be held in Montreal, Quebec.

Gas Company Displays Painting Borrowed by State Authorities

Jefferson City, Mo. — Unusual recognition has been extended to the Laclede Gas Light Company of St. Louis by the State of Missouri, which has borrowed from the Laclede and installed for temporary showing in the State Capitol here a series of seven oil paintings depicting the evolution of heat, and



an eighth portraying the discovery of St. Louis by Pierre Laclede, for whom the big Missouri gas company is named.

The paintings, which are in oil upon wood veneer, are in the Maxfield Parrish style and were painted for the Laclede by St. Louis artists last winter. They were used in the windows of the gas company in March to dedicate the remodelled merchandising floor of the Laclede Gas building, a change made since Charles A. Munroe became chairman of the board. So much favorable comment was attracted in St. Louis that the State Museum Commission at once opened negotiations to borrow them for display in the Natural Resource Museum in the State Capitol. They were wanted to dramatize to Missourians who visit the museum the large part which natural resources play in industrial achievement.

Because mural decorations costing close to $1,000,000 and painted by artists of international reputation had been permanently installed in the Capitol, the approval of the Capitol Decorations Commission was insisted upon before the Laclede would loan its paintings. This approval, however, was freely given, and on June 22 Vincent M. Carroll, director of public relations for the Laclede, and S. C. Rieser, display manager for the company, installed the series in the marble halls of the west wing of the Capitol, where thousands since have viewed them. The exhibition probably will continue for several weeks more.

A. G. A. Convention Plans Progressing

Sections to Have Comprehensive Programs

Further plans for the seventh annual convention of the American Gas Association, to be held at Atlantic City the week of October 12, were made public the other day, and give promise of some of the most interesting business sessions ever held.

One of the strongest and most active groups in the association are the accountants. A feature of their program this year will be the report of the Committee on Relations with Customers, which has been scheduled to take up the entire Tuesday afternoon session. Sub-committee reports will deal with gas company standards in treating with customers and other interesting intercompany developments.

Accounting Papers

Another important sectional report will be that of the Committee on Customers' Accounting, which will describe the experience of the Public Service Electric & Gas Company in changing their entire system of customers' accounting to a modified form of the so-called Baltimore system of bookkeeping without books, and at the same time arranging for centralizing billing on a combination bill. Other reports of more than usual interest will be made by the Committee on Analysis of Gas Company Statistics, and the sub-committee on Development of a Cost System for Gas Companies.

For the fourth consecutive year the Accounting Section will present an exhibit at the convention showing modern methods of accounting in the different branches of this work. This year the exhibit will occupy three booths and will present a diversified line that will not only interest the accountants, but will attract the executives and all gas men who want to know the latest developments in the accounting field.

The Commercial Section program will center around the Three-Year Sales Plan. Committee reports on sales stimulation, home service, house heating, architects' and builders' service, and refrigeration, will be presented in brief form orally by the chairmen, accompanied by complete and detailed printed reports. Considerable attention will be devoted to the various forms of advertising and these will be discussed by several experts outside the industry, following the practice found so valuable at the two summer sales conferences held by the section at Mohonk and Gloucester.

Industrial

The Industrial Gas Section will have three sessions. Some of the important subjects scheduled for presentation and discussion are: "Rates as Affecting the Industrial Gas Business," "The Organization of an Industrial Fuel Department," "Advertising" and "Research." In addition to these, there will be reports by the Publicity Committee, Advertising Committee, Committee on Industrial Salesmen and Co-operative Committee on Contact with Educational Institutions. At the third session three papers of outstanding importance will be presented. The first will deal with fuel competition, what our competitors are doing, and what we must do to meet this competition. The second will deal with insulation, particularly with reference to house heating. The third will cover combustion control.

Technical Session meetings will be featured by a paper entitled "Types of Gas Plants and Quality of Gas Best Suited for the Development of the Gas Industry," by J. A. Perry. Another valuable contribution will be that of Professor Harry A. Curtis of Yale University, who will read a paper on "By-Product Ammonia and the Air Nitrogen Process." The report of the Water Gas Committee will occupy the entire Thursday afternoon session, one of the features of the report being the latest developments with regard to the Jeffries-Norton Oxygen Plant at Worcester, Mass. The Wednesday afternoon session will be devoted to the report of the Distribution Committee.

Announcement will be made later of the National Conference on Information Committee Work, which is to be held under the auspices of the Publicity and Advertising Section.

Contracts Awarded

Interstate Public Service Co., Newcastle, Indiana, is making plans for additional capacity to its present plant and has contracted with the Western Gas Construction Co. for a carburetted water gas set to be installed at their plant.

The Manchester (N. H.) Light & Power Co. has awarded a contract to the U. G. I. Contracting Co. of Philadelphia for the installation of new water gas generating equipment in order to meet the increasing demands that are being made upon that company's manufacturing resources.

U. G. I. Establishes Meritorious Service Award

Heroes and heroines of the workaday world, men and women who forget self and subordinate personal safety in order to maintain gas, electric or street railway service, are to be honored by the United Gas Improvement Company.

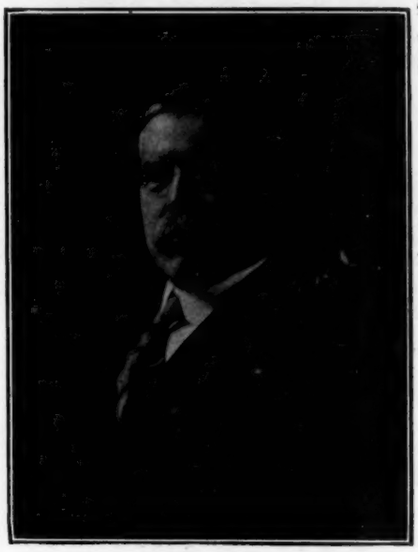
The Samuel T. Bodine Meritorious Award, named after the president of the United Gas Improvement Company, will be given to employees of all public utility companies controlled or operated by the United Gas Improvement Company, for "extraordinary effort, without regard to self, toward maintaining uninterrupted service, or toward restoring uninterupted service, or in some manner indicating exceptional fidelity to the public interest."

One of the distinctive features of the award conditions is that the honor shall not be conferred merely for the saving or the risking of human life. The feature of service to the public must be present.

Further, according to the announcement, the act of heroism must occur in the territory of the company, although in the discretion of the Meritorious Service Award Board the award may be given for an exceptional act elsewhere.

Acts of heroism will be placed before the board by the managing officers of the various companies. They will take note of such acts as are worthy of consideration and forward a statement of the facts with papers, photographs, statements of witnesses and affidavits to permit the board to pass intelligent judgment.

Two classes have been made of the cases to be honored: those which should be awarded medals and those which should receive honorable mention. A bronze medal, together with a certificate, suitably engraved, to set forth the reasons for the award, will be given. In case the act qualified for honorable mention, a certificate, similarly engraved, will be awarded.



Samuel T. Bodine, President U. G. I. Co., Philadelphia, Pa.

Presentation of the award will be made at the discretion of the board. When the award is to be made locally it will be forwarded to the managing officer of the company in which the employee works and the presentation will be made with appropriate ceremony.

Many acts of heroism by public utility employees have occurred in the last few years. Men have risked their lives on water and land, through fire and flood, to keep the service intact. It is to recognize such acts that the United Gas Improvement Company has established the award.

Pennsylvania Gas Men Meet to Discuss Convention Plans

Lebanon, Pa.—Leading members and officials of the Pennsylvania Gas Association assembled recently at the office of the Lebanon Gas & Fuel Company, in their capacity as members of the Paper and Program Committee, when discussion of outlining a program to feature the mid-year meeting of the association, to be held in December at Scranton, were discussed.

Lloyd Philips, manager of the local company, is chairman of the committee, and presided at the meeting. Other members present were: W. G. Murfit of Newton, Pa., president of the State Gas Association; George Cullen, secretary, of the Harrisburg Gas Company; H. H. Miller, of the Gettysburg Gas Company; and A. B. Schwartz, of the Citizens Gas Company of Mt. Carmel.